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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,095	09/25/2003	Jong-Shing Guo	412557	6356
30954	7590	02/15/2006	EXAMINER	
LATHROP & GAGE LC 2345 GRAND AVENUE SUITE 2800 KANSAS CITY, MO 64108			SASTRI, SATYA B	
			ART UNIT	PAPER NUMBER
			1713	

DATE MAILED: 02/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/671,095

Applicant(s)

GUO ET AL.

Examiner

Satya B. Sastri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-78 is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-18, 22, 23, 25, 26, 44, 46-51, 55, 59, 61-65, 69, 73, 75-78 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims withdrawn from consideration are 19-21,24,27-43,45,52-54, 56-58,60,66-68,70-72 and 74.

DETAILED ACTION

1. This office action is in response to amendment filed on December 5, 2005. *Claims 1-9, 11-78* are now pending in the application. Of these, *claims 19-21, 24, 27-43, 45, 52-54, 56-58, 60, 66-68, 70-72, 74* are withdrawn from consideration as non-elected invention.
2. It is noted that status identifiers are incorrect in that the withdrawn claims are not identified correctly in the amendment.
3. Claims readable on the elected species are incorrectly identified by the applicant and must include *claim 55* and as elected invention and *claim 70* that includes a mixture of polymerizable and non-polymerizable surfactant is a non-elected invention.
4. Applicants' remarks and amendment have been fully considered with the following results: Rejection of *claims 50, 51, 59, 64* under 35 U.S.C. 102(b) as anticipated by Kawabata et al. (US 5,620,796), rejection of claims *50, 51, 59, 61-63* under 35 U.S.C. 102(b) as anticipated by Narimatsu et al. (EP 0530729 A1) and rejection of *claims 1-3, 6-9, 11-16, 44, 49, 50, 59* under 35 U.S.C. 102(b) as being anticipated by JP 59,179,676 ('676, chemical abstract) are all sustained. Following grounds of new rejections are introduced.

Previously Cited Statutes

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5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. ***Claims 1-9, 11-18, 44, 49*** are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kawabata et al. (US 5,620,796).

The prior art to Kawabata et al. discloses a method of an acrylic emulsion adhesive polymerization mixture comprising (a) 90-98% of C4-C14 alkyl (meth)acrylate and 2-10% of (b) acrylic acid, methacrylic acid and a polar monomer selected from the group of N-vinylpyrrolidone and N-vinylcaprolactam. Additionally, copolymerizable vinyl monomers such as methyl (meth)acrylate, ethyl (meth)acrylate etc. may be used in amounts of 0-40 parts based on 100 parts by wt. of monomeric mixture (column 3, lines 1-14). Furthermore, the composition may include a surfactant mixture of polymerizable anionic surfactant (I or II) and nonionic surfactant (column 2, lines 1-27). Examples of nonionic surfactants are disclosed as formula V while unsaturated non-ionic surfactants are disclosed as III and IV (column 8, lines 25-46). Crosslinking agents disclosed include polyfunctional aziridine compounds and may be used in amounts ranging from 0.1 to 1.5 parts by wt. relative to 100 parts by weight of the total monomer (column 4, lines 52-67, column 5, lines 1-2). For improved stability, the polymer emulsion is preferably adjusted to pH 6 to 8.5 (column 4, lines 38-40).

Working example 8 in column 6 discloses 74 parts by wt. of n-butyl acrylate, 20 parts of ethyl acrylate, 2 parts by wt. of each acrylic acid and methacrylic acid and 2 parts of N-vinyl pyrrolidone. Crosslinking agent CHEMTITE DZ-22E is disclosed as polyfunctional aziridine compound (column 4, lines 58-62).

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Given that the instantly claimed composition reads on the prior art example, and given that material and their properties are inseparable, a reasonable basis exists to believe that the prior art composition would inherently have the instantly claimed properties. It has been held that where applicant claims a composition in terms of function, property or characteristic where said function is not explicitly shown by the reference and where the examiner has explained why the function, property or characteristic is considered inherent in the prior art, it is appropriate for the examiner to make a rejection under both the applicable section of 35 USC 102 and 35 USC 103 such that the burden is placed upon the applicant to provide clear evidence that the respective compositions do in fact differ. *In re Best*, 195 USPQ 430, 433 (CCPA 1977); *In re Fitzgerald et al.*, 205 USPQ 594, 596 (CCPA 1980).

7. ***Claims 65 and 73*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabata et al. (US 5,620,796).

Prior art to Kawabata et al. is disclosed above in paragraph 6 and is incorporated herein by reference.

The difference between the prior art and the instant invention is that the prior art does not teach the specific monomeric composition as claimed instantly.

Even though the prior art does not explicitly teach the use of at least 5% by wt. of methyl methacrylate in the emulsion polymer composition, it contains a generic teaching that methyl (meth)acrylate, ethyl methacrylate etc. may be used in amounts of 0-40% by wt. as comonomers (column 3, lines 1-8). Even though working example discloses the use of ethyl methacrylate in working example, it is noted that the disclosure teaches the functional equivalence of the

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two homologs. Thus, it would have been obvious to one skilled in the art at the time the invention was made to use any the functionally equivalent homologs such as methyl (meth)acrylate and ethyl methacrylate and thereby obtain the instant invention, absent a showing of unexpected results.

8. ***Claims 22, 23, 25, 26, 55, 69*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabata et al. (US 5,620,796) in view of Phan et al. (US 5,969,032).

The prior art to Kawabata et al. is adequately presented in paragraph 6 above and is incorporated herein by reference.

The difference between the prior art and the present invention is that the prior art does not teach the specific polymerizable surfactant in the adhesive composition as claimed instantly.

The primary reference discloses the use of polymerizable surfactants, albeit of a different nature. Secondary reference to Phan et al. disclose the use of an allyl amine salt of alkyl benzene sulfonate with allyl amine salt of dodecylbenzene sulfonate as the preferred species for polymerization of acrylic latexes (column 5, lines 14-29). The use of such surfactant allows lower levels of polymerizable surfactants to control the latex particle size and to stabilize the latex particles (abstract). In light of such benefits, it would have been obvious for one of ordinary skill in the art at the time the invention was made to include with allyl amine salt of dodecylbenzene sulfonate as the preferred species of surfactant for polymerization of acrylic latexes of Kawabata et al. and thereby obtain the present invention.

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9. ***Claims 46-48, 61-63, 75-77*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabata et al. (US 5,620,796) in view of Gutman et al. (US 5,508,107).

The prior art to Kawabata et al. is adequately presented in paragraph 10 above and is incorporated herein by reference.

The difference between the prior art and the present invention is that the prior art does not teach the specific crosslinking agent in the adhesive composition as claimed instantly.

The primary reference discloses the use of crosslinking agents based on polyaziridine compounds. Secondary reference to Gutman et al. is in an analogous field of pressure sensitive adhesives and specifically teaches the use of crosslinking agents such as trimethylolpropane-tris(B-(N-aziridinyl)propionate. The use of such aziridines provides water-resistance necessary while maintaining the required balance of adhesion and removability (column 6, lines 17-30). In light of such benefits, it would have been obvious for one of ordinary skill in the art at the time the invention was made to include trimethylolpropane-tris(B-(N-aziridinyl)propionate as the preferred species of crosslinking agent for acrylic latexes of Kawabata et al. and thereby obtain the present invention.

10. ***Claims 1-6, 11-18, 44, 46-49*** are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Narimatsu et al. (EP 0530729 A1).

Prior art teaches pressure sensitive adhesive obtained by emulsion-polymerizing a monomer mixture comprising alkyl (meth)acrylate monomer and 0.1-10 parts by wt. per 100 parts of monomer mixture, of carboxyl group-containing monomer (page 5). (Meth)acrylate monomers are disclosed in lines 4-9, page 5 while anionic monomers are listed in lines 10-11.

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Aziridine type crosslinking agents in amounts of 0.01 to 10 parts by wt. are disclosed (abstract, page 5, lines 49-51). Working example 1 on page 8 discloses a copolymer of 23 parts of methylmethacrylate, 73 parts of 2-ethylhexyl acrylate, 2 parts of glycidyl acrylate and 2 parts of acrylic acid (page 8, lines 13-16).

Given that the instantly claimed composition is disclosed in the prior art, and given that material and their properties are inseparable, a reasonable basis exists to believe that the prior art composition would inherently have the instantly claimed properties. It has been held that where applicant claims a composition in terms of function, property or characteristic where said function is not explicitly shown by the reference and where the examiner has explained why the function, property or characteristic is considered inherent in the prior art, it is appropriate for the examiner to make a rejection under both the applicable section of 35 USC 102 and 35 USC 103 such that the burden is placed upon the applicant to provide clear evidence that the respective compositions do in fact differ. *In re Best*, 195 USPQ 430, 433 (CCPA 1977); *In re Fitzgerald et al.*, 205 USPQ 594, 596 (CCPA 1980).

11. **Claims 7-9, 65, 73, 75-78** are rejected under 35 U.S.C. 103(a) as being unpatentable over Narimatsu et al. (EP 0530729 A1).

Prior art to Narimatsu et al. is disclosed above in paragraph 10 and is incorporated herein by reference.

The difference between the prior art and the instant invention is that the prior art does not teach the specific monomeric composition as claimed instantly.

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Even though the prior art does not explicitly teach the use of at least 5% by wt. of methyl methacrylate in the emulsion polymer composition, it contains a generic teaching that methyl (meth)acrylate, ethyl methacrylate and higher alkyl (meth)acrylates etc. and combination thereof may be used as comonomers (page 5, lines 4-9). Working example that discloses the use of methyl methacrylate in an amount of 23% by wt. is only a preferred embodiment. It is the examiner's position that composition ranges close to that disclosed in the prior art are obvious modifications to one skilled in the art so as to obtain products with similar properties. Thus, it would have been obvious to one skilled in the art at the time the invention was made to use appropriate amounts of monomers, including the instantly claimed range and thereby obtain the instant invention, absent a showing of unexpected results.

12. **Claims 4, 5, 65, 73, 78** are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 59,179,676 ('676, chemical abstract).

Prior art to '626 concerns adhesive tapes comprising 80-99% (meth)acrylates with 1-20% unsaturated acids and crosslinking with an aziridinyl compound and neutralized by alkali. The specific teaching of 80 parts of 2-ethylhexyl acrylate, 20 parts of ethyl acrylate, 5 parts of acrylic acid and 5 parts of 2-hydroxyethyl acrylate (abstract).

The difference between the prior art and the instant invention is that the prior art does not teach the specific monomeric composition as claimed instantly.

Even though the prior art does not explicitly teach the use of at least 5% by wt. of methyl methacrylate in the emulsion polymer composition, it contains a working example with 20 parts ethyl acrylate as opposed to methyl acrylate claimed instantly (working example 2). It is noted

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that ethyl acrylate and methyl acrylate are homologs that would afford polymers with similar properties. Thus, it would have been obvious to one skilled in the art at the time the invention was made to substitute ethyl acrylate with methyl acrylate in the compositions disclosed in '626 and thereby obtain the instant invention, absent a showing of unexpected results.

With regard to claims 4 and 5, the prior art teaches a broad range of 1-20% by wt. of acid monomers and any range within the disclosed range would be obvious to one skilled in the art.

Response to Arguments

13. With regard to applicant's remarks on '626 rejection, it is noted that example 2 in the disclosure includes an aziridinyl crosslinked product of a polymer comprising 80g 2-ethylhexyl acrylate, 20g of ethylacrylate, 20g of acrylic acid, 5 g of hydroxyethyl acrylate and the disclosed peel strength for the in table 2 is 720 g/20mm. Thus, claims **1-9, 11-16, 44, 49** are anticipated by the prior art. With regard to **claims 50 and 59**, it is noted that example 1 satisfies all the limitations recited in the composition.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satya Sastri at (571) 272 1112.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached at (571) 272 1114.

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The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SATYA SASTRI

February 10, 2006



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